

WE CLAIM:

1. A table saw comprising:

a base;

a saw blade mounted rotatably on said base;

5 a rail unit mounted on said base and extending  
in a longitudinal direction;

a rip fence unit including a rip fence that  
extends in a transverse direction relative to said  
longitudinal direction, and a sliding member that is  
10 secured to said rip fence and that is disposed above  
and mounted slidably on said rail unit so as to be  
slidable toward and away from said saw blade in said  
longitudinal direction; and

15 a positioning unit mounted on said rip fence unit  
and including a clamping member that is disposed below  
and swingable toward and away from said rail unit,  
and that is operable by an external force applied  
thereto so as to swing between a clamping position,  
in which said clamping member abuts against said rail  
20 unit and cooperates with said sliding member to clamp  
said rail unit therebetween, thereby arresting  
sliding movement of said sliding member on said rail  
unit, and a releasing position, in which said clamping  
member is disconnected from said rail unit so as to  
25 permit sliding movement of said sliding member  
together with said rip fence on said rail unit.

2. The table saw of Claim 1, wherein said base includes

a front plate that has two opposite sides and that is formed with a pair of front studs projecting frontwardly and respectively from said opposite sides of said front plate, a pair of rail-mounting brackets, 5 each of which is formed with a front sleeve that is sleeved on a respective one of said front studs, and a pair of rail-holding members that are respectively secured to said rail-mounting brackets and that define a pair of C-shaped upper retaining grooves 10 which open upwardly and a pair of C-shaped lower retaining grooves which open downwardly, said rail unit including an upper rail rod that extends in said longitudinal direction into and through said upper retaining grooves and that abuts against said 15 rail-holding members so as to be secured thereto, and a lower rail rod that is parallel to said upper rail rod and that extends in said longitudinal direction into and through said lower retaining grooves and that abuts against said rail-holding members so as to be 20 secured thereto, said sliding member including a mounting plate and a pair of protrusions that project downwardly from said mounting plate and that define a pair of C-shaped recesses for extension of said upper rail rod therethrough, each of said recesses 25 in said protrusions of said sliding member being defined by a recess-defining wall that is in sliding contact with said upper rail rod when said clamping

member is disposed at said releasing position, and that abuts tightly against said upper rail rod when said clamping member is disposed at said clamping position.

5     3. The table saw of Claim 2, wherein each of said rail holding members includes a screw bolt, a first half that is secured to the respective one of said rail-mounting brackets, and a second half that complements said first half and that is adjustably  
10    secured to said first half through said screw bolt so as to adjust dimensions of said upper and lower retaining grooves and thus the tightness of said upper rail rod in said upper retaining grooves and said lower rail rod in said lower retaining grooves.

15    4. The table saw of Claim 3, wherein said base further includes a rear plate that has two opposite sides and that is formed with a pair of rear studs projecting rearwardly and respectively from said opposite sides of said rear plate, and a rear supporting plate that  
20    is formed with a pair of rear sleeves that are sleeved respectively on said rear studs, said rip fence having front and rear ends, said rip fence unit further including a rear mounting plate that is secured to said rear end of said rip fence and that is seated  
25    slidably on said rear supporting plate, said mounting plate of said sliding member being secured to said front end of said rip fence.

5. The table saw of Claim 4, wherein said mounting plate of said sliding member has front and bottom sides, said positioning unit further including a handle-mounting bracket that is secured to and that projects forwardly from said front side of said mounting plate of said sliding member, a handle pivoted to said handle-mounting bracket, a pair of clamp-mounting brackets that are secured to said bottom side of said mounting plate of said sliding member and that are respectively disposed at two opposite sides of said handle-mounting bracket, and a guiding block that is disposed between and that is secured to said clamp-mounting brackets and that is formed with a guiding hole which extends in a vertical direction transverse to said longitudinal direction and said transverse direction, said clamping member being disposed below said guiding block, extending in said transverse direction, and having a driven end that is aligned with said guiding hole in said vertical direction, and a clamping end that is opposite to said driven end in said transverse direction and that is disposed underneath said lower rail rod, said clamping member being formed with a pivoting ear between said driven end and said clamping end of said clamping member, said pivoting ear being disposed between and being pivoted to said clamp-mounting brackets so as to permit swinging of said

clamping member, said positioning unit further including a linking member that is pivoted to said handle, and a pressing rod that is pivoted to said linking member and that extends in said vertical 5 direction into and through said guiding hole so as to press said driven end of said clamping member to move downwardly when said handle is turned downwardly, which results in upward movement of said clamping end and abutment of said clamping end against said lower 10 rail rod, which, in turn, results in clamping of said rail unit between said clamping end of said clamping member and said protrusions of said sliding member.

6. The table saw of Claim 5, wherein said positioning unit further includes a pivot pin that extends in said 15 longitudinal direction through said clamp-mounting brackets and that has a connecting end disposed adjacent to one of said clamp-mounting brackets, and a fixed end that is fastened to the other of said clamp-mounting brackets, said table saw further comprising a fine adjusting unit that includes an operating rod extending through said connecting end 20 of said pivot pin and having an engaging end which is disposed underneath said lower rail rod, and a friction member that is sleeved on and that is secured 25 to said engaging end of said operating rod and that is in frictional contact with said lower rail rod, said operating rod being rotatable so as to drive said

pivot pin together with said clamp-mounting brackets, said positioning unit, and said mounting plate of said sliding member to slide relative to said rail unit in said longitudinal direction by virtue of friction 5 between said friction member and said lower rail rod when said clamping member is disposed at said releasing position, thereby permitting fine adjustment of the position of said rip fence unit on said rail unit.